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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/436,990	11/09/1999	CLAUDE LE DANTEC	1807.0832	7382

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EXAMINER	
CHIEU, PO LIN	
ART UNIT	**PAPER NUMBER**
2615	9

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/436,990	DANTEC, CLAUDE LE	
	Examiner	Art Unit	
	Polin Chieu	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/16/03 have been fully considered but they are not persuasive. The Applicant argues that Moll does not teach or suggest "a method of compressing a digital format in which information representing a physical quantity is accompanied by predictable data", since predictable data is different from data containing repeated patterns. Predict is defined as foretelling on the basis of observation, experience, or scientific reason (Merriam Webster's Collegiate Dictionary, Tenth Edition). Since the repeated patterns are detected (or observed) prior to recording, they are considered to be predictable data. Further, the Applicant's own specifications discloses the removal of successive repetitions of data and/or iterative series of data (page 2, lines 16-19).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 12, 17-21, 26-28, 37, and 42-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Moll (5,600,316).

Regarding claims 1 and 26, Moll discloses a method of compressing a digital format (col. 3, lines 1-13) in which information (col. 3, lines 41-46) representing a

physical quantity is accompanied by predictable data (col. 4, lines 15-27) having a value is independent of that of the information representing a physical quantity, comprising an operation of reducing the number of the predictable data (col. 4, lines 15-27), the data and information representing a physical quantity resulting from this reduction operation being capable of allowing the reconstitution of predictable data accompanying the information representing a physical quantity, in accordance with the digital format (col. 5, line 45 – col. 6, line 12).

Regarding claims 2 and 27, Moll discloses a step of removing predictable data (col. 4, lines 15-27); and a step of inserting substitution data, having a number less than the number of data removed during the removal step (col. 4, lines 45-53).

Regarding claims 3 and 28, Moll discloses that the digital format includes successive repetitions at least one of data and an iterative series of data, in which during the removal operation, at least two data items (by definition a repetition must contain two data items: the initial data item and the repetition of the initial data item) of the repetitions or the series are removed (col. 4, lines 15-27); and during the insertion operation, at least one data item of the repetitions or the series is inserted, in a header relating to all the information to be transmitted (457, fig. 4).

Regarding claims 12 (as dependent to any one of claims 1-3) and 37 (as dependent to any one of claims 26-28), Moll discloses that that an operation of recording, on a data medium, data resulting from the reduction operation (col. 3, lines 1-32).

Regarding claim 17, Moll discloses an operation of reducing the number of predictable (col. 4, line 15-27), the data and information (col. 3, lines 41-46) representing a physical quantity resulting from this reduction operation being able to allow the reconstitution of predictable data accompanying the information representing a physical quantity, in accordance with the digital format (col. 5, line 45 – col. 6, line 12); an operation of receiving the information and the predictable data resulting from the reduction operation (220, fig. 2); an operation of reconstituting predictable data in accordance with the digital format, the reconstituted predictable data representing the received data and being independent of the information and greater in number than the number of data items received (col. 5, line 45 – col. 6, line 12); and an operation of organizing the reconstituted predictable data and the information, in accordance with the digital format (243-244, fig. 2).

Regarding claims 18 and 43, Moll discloses the operation of reducing, reconstituting, and organizing the predictable data, as discussed in the art rejection of claim 17 (please refer to the art rejection of claim 17). Moll also discloses an operation of recording predictable data and information representing a physical quantity resulting from this reduction operation, on a recording medium (col. 3, lines 21-32); and an operation of reading the information and the data resulting from the reduction operation, on the recording medium (col. 5, lines 57-60).

Regarding claim 19, Moll is considered to include an operation of determining a reduction mode, during which at least one of the data items and information items to be transmitted is taken into account in order to determine a reduction mode and, during the

reduction operation, the reduction mode determined during the reduction mode determination operation is used (col. 3, lines 1-13). Moll determines a reduction mode (i.e. repetition, partial repetition, and near repetition), wherein the data and information is taken into account by looking for different types of repetition (col. 4, lines 15-27), and the determined reduction mode is used (col. 7, lines 10-18).

Regarding claim 20, Moll discloses that the reduction operation includes at least one data item representing a reduction mode used during the operation of reducing at least one of the predictable data and the transmitted information (col. 7, lines 10-18). The mask (465) indicates if the partial repetition or near repetition mode was used; or if the repetition mode was used.

Regarding claims 21 and 42, Moll discloses an operation reading at least part of the received data (col. 5, lines 57-60); an operation of determining predictable data (457, fig. 4) representing the received data and having a value independent of that of the information (468), the predictable data being greater in number than the number of received data (i.e. because the data 457-466 is the received data, but the received data represent a repeated pattern that is generated during reproduction); and an operation of organizing the predictable data and the information, the organization being in accordance with the digital format and causing the predictable data and the information to alternate (fig. 4). The predictable data (457-466) and the information (468) does not have to alternate; however, there is no suggestion by Moll that the predictable data and the information cannot alternate. Therefore, the examiner believes that Moll meets the

limitations of the claim, since the claim does not recite that the predictable data and the information always alternates.

Regarding claim 25, Moll discloses an operation of determining data intended to accompany information (248, col. 5, line 45 – col. 6, line 12), data whose value is independent of that of the information (fig. 4); an operation of sending or storing the information and the data (col. 3, lines 1-13); and operation of receiving or reading the information, accompanied by the data (col. 5, lines 57-60); and operation of determining predictable data representing received data and whose value is independent of that of the information (col. 5, line 45 – col. 6, line 12), the predictable data being greater in number that the number of received data (i.e. because the data 457-466 is the received data, but the received data represent a repeated pattern that is generated during reproduction); and a operation of organizing the predictable data and the information, the organization being in accordance with the digital format alternating predictable data and information (as discussed above).

4. Claims 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Moll in view of Kim (5,473,377).

Regarding claims 15 and 16, Moll discloses a compression method, as discussed in the art rejection of claims 1-3. Please refer to the art rejection of claims 1-3. However, Moll does not disclose estimating a need to reduce or compress data.

Kim teaches estimating a need to reduce or compress a quantity of data and information representing a physical quantity (col. 1, lines 15-28 and col. 4, lines 50-59); and when reduction or compression is necessary, implementing a compression method.

It would have been highly desirable to estimate a need to reduce or compress data so that the extent of the compression method described by Moll must be used.

Therefore, it would have been highly desirable to a person of ordinary skill in the art at the time of the invention to estimate a need to reduce or compress data in the device of Moll.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 4-5 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll.

Regarding claims 4-5 (dependent from claims 2 or 3) and 29-30 (dependent from claims 27 or 28), Moll discloses eliminating repetition in digital data (col. 3, lines 1-47), wherein the data can be any type of data. It is well known in the art that video, audio, and computer data often use identifiers or headers (considered to be reserved data) in various digital formats. Since Moll eliminates repetition in any part of the data (note: no part of the disclosure of Moll suggest that headers or the like are excluded from the repetition elimination operation) it is possible that identifiers (or reserved data) may be removed during the removal operation.

It would have been highly desirable to have headers or identifiers in digital data so that the routing of data can be performed easily. For example, in the case that a digital format has audio and video data, it is likely that headers or identifiers will be used to route the audio and video to the proper decoders.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to have identifiers (or reserved data), which would result in the removal of the identifiers if the identifiers have repetitive data, in the device of Moll.

Regarding claims 6 and 31, Moll discloses that during the operation of inserting substitution data, and identifier for at least one of the parts of the set of data is inserted (fig. 4).

7. Claims 7, 13, 22, 32, 38, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll in view of Kuroda et al (6,501,904).

Regarding claims 7, 13, 32, and 38, Moll discloses performing the operation on digital (col. 3, lines 1-13) audio and/or video (col. 3, lines 41-46). However, Moll does not disclose a DV format or reading a DIF format.

Kuroda et al teaches a DV format (col. 8, lines 45-56) and a DIF format (fig. 10). It would have been obvious to use a DV format or DIF format since they are digital audio/video formats.

It would have been highly desirable to use a DV format or a DIF format since they are commonly used for VCRs and camcorders (col. 4, lines 45-56), thereby allowing the reduction to be performed before recording to a videotape.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use a DV format or a DIF format in the device of Moll.

Regarding claims 22 and 44, Moll discloses determining predictable data and organizing the predictable data, as discussed previously. However, Moll does not disclose marking the information in the frames, and marking the structural data in the frames.

Kuroda et al teaches marking the information in the frames (i.e. headers, fig. 12); and marking the structural data in the frames (i.e. subcode, VAUX, audio & video, fig. 10).

It would have been highly desirable to mark the information in the frames and mark the structural data in the frames so that the data is in a DV format allowing the separating of data into different types during reproduction.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to mark information in the frames and the structural data in the device of Moll.

8. Claims 8-9 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll in view of Lebizay et al (6,144,658).

Regarding claims 8-9 and 33-34, Moll discloses performing the operation on transmitted data (col. 3, lines 1-13). However, Moll does not disclose a wireless transmission channel or a wireless communication protocol.

Lebizay et al teaches a wireless transmission channel or wireless communication protocol (col. 1, lines 44-47) removing repetitive data (col. 4).

It would have been highly desirable to perform the removal operation on a wireless transmission channel or wireless communication protocol so that predictable data is removed (note: Lebizay et al only removes idle packets col. 4, lines 16-51).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to perform the reduction operation on a wireless transmission channel or a wireless communication protocol in the device of Moll.

9. Claims 10-11 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll in view of El-Gohary et al (4,456,956).

Regarding claims 10-11 and 35-36, Moll discloses performing the operation on transmitted data (col. 3, lines 1-13). However, Moll does not disclose a radio transmission channel or a optical transmission channel.

El-Gohary et al teaches a radio transmission channel or a optical transmission channel (col. 9, lines 45-56). Since these are types of transmission channels it would have been obvious to perform the reduction operation on them.

It would have been highly desirable to perform the removal operation on a radio transmission channel or a optical transmission channel so that predictable data is removed (col. 3, lines 1-13 of Moll).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to perform the reduction operation on a radio transmission channel or a optical transmission channel in the device of Moll.

10. Claims 14 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll in view of Yanagihara et al (6,172,989).

Regarding claims 14 and 39, Moll discloses performing the operation on transmitted data (col. 3, lines 1-13). However, Moll does not disclose a IEEE 1394 bus.

Yanagihara et al teaches a IEEE 1394 bus (abstract). Since a IEEE 1394 bus is a types of transmission channel it would have been obvious to perform the reduction operation.

It would have been highly desirable to perform the removal operation on data in a IEEE 1394 bus so that predictable data is removed (col. 3, lines 1-13 of Moll).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to perform the reduction operation on data in a IEEE 1394 bus in the device of Moll.

11. Claims 23 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll in view of Kuroda et al in view of Lebizay.

Regarding claims 23 and 45, Moll discloses performing the operation on transmitted data (col. 3, lines 1-13). However, Moll does not disclose a wireless transmission channel or a wireless communication protocol.

Lebizay et al teaches a wireless transmission channel or wireless communication protocol (col. 1, lines 44-47) removing repetitive data (col. 4).

It would have been highly desirable to perform the removal operation on a wireless transmission channel or wireless communication protocol so that predictable data is removed (note: Lebizay et al only removes idle packets col. 4, lines 16-51).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to perform the reduction operation on a wireless transmission channel or a wireless communication protocol in the device of Moll.

12. Claims 24 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll in view of Kuroda et al and Yanagihara et al.

Regarding claims 24 and 46, Moll discloses performing the operation on transmitted or stored data (col. 3, lines 1-13). However, Moll does not disclose a protocol for transmitting or storing digital images.

Yanagihara et al teaches a protocol for transmitting or storing digital images (abstract). Since a IEEE 1394 bus is a types of transmission channel (i.e. to a recording device or the like) it would have been obvious to perform the reduction operation.

It would have been highly desirable to perform the removal operation on data in a IEEE 1394 bus so that predictable data is removed (col. 3, lines 1-13 of Moll).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to perform the reduction operation on data in a IEEE 1394 bus in the device of Moll.

13. Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll in view of Kim.

Regarding claims 40 and 41, Moll does not disclose estimating the need for reduction in the quantity (or compression) of data and information; and performing the compression or reduction when it is considered necessary.

As discussed previously in the art rejection of claims 15-16, Kim discloses estimating the need for reduction in the quantity of data and information i.e. setting the quantization rate based on buffer fullness. It would have been obvious to perform the estimation in the device of Moll since the device of Moll reduces any type of digital data.

It would have been highly desirable to estimate the need for reduction so that MPEG type of digital data can be reduced by the device of Moll.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to estimate the need for reduction in the device of Moll.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Polin Chieu whose telephone number is (703) 308-6070. The examiner can normally be reached on M-Th 8:00 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B. Christensen can be reached on (703) 308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

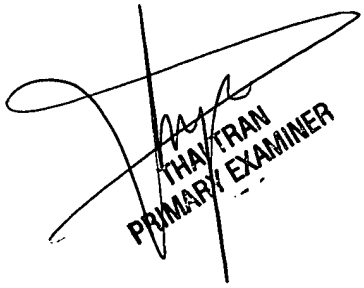
Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



PC
August 21, 2003